

**APPENDIX**

Claims on appeal:

11. An isolated antibody selected from the group consisting of:

a) an antibody which specifically binds to a polypeptide comprising the amino acid sequence of SEQ ID NO:1, wherein the antibody specifically binds to an epitope of a polypeptide of SEQ ID NO:1,

b) an antibody which specifically binds to a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:1, wherein said polypeptide has CoA dehydrogenase activity, and wherein the antibody specifically binds to an epitope of a polypeptide at least 90% identical to SEQ ID NO:1, and

c) an antibody which specifically binds to a polypeptide comprising an immunogenic fragment of a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, wherein said fragment comprises at least 15 contiguous amino acid residues of SEQ ID NO:1, and wherein the antibody specifically binds to an epitope of the fragment.

31. The antibody of claim 11, wherein the antibody is:

- a) a chimeric antibody,
- b) a single chain antibody,
- c) a Fab fragment,
- d) a F(ab')<sub>2</sub> fragment, or
- e) a humanized antibody.

32. A composition comprising an antibody of claim 11 and an acceptable excipient.

34. A composition of claim 32, wherein the antibody is labeled.

36. A method of preparing a polyclonal antibody with the specificity of the antibody of claim 11, the method comprising:

- a) immunizing an animal with a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
- b) isolating antibodies from said animal, and
- c) screening the isolated antibodies with the polypeptide, thereby identifying a polyclonal antibody which binds specifically to a polypeptide comprising the amino acid sequence of SEQ ID NO:1.

37. A polyclonal antibody produced by a method of claim 36.

38. A composition comprising the polyclonal antibody of claim 37 and a suitable carrier.

39. A method of making a monoclonal antibody with the specificity of the antibody of claim 11, the method comprising:

- a) immunizing an animal with a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
- b) isolating antibody producing cells from the animal,
- c) fusing the antibody producing cells with immortalized cells to form monoclonal antibody-producing hybridoma cells,
- d) culturing the hybridoma cells, and
- e) isolating from the culture monoclonal antibody which binds specifically to a polypeptide comprising the amino acid sequence of SEQ ID NO:1.

40. A monoclonal antibody produced by a method of claim 39.

41. A composition comprising the monoclonal antibody of claim 40 and a suitable carrier.

42. The antibody of claim 11, wherein the antibody is produced by screening a Fab expression library.

43. The antibody of claim 11, wherein the antibody is produced by screening a recombinant immunoglobulin library.

58. An isolated antibody which specifically binds to a polypeptide selected from the group consisting of:

- a) a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, and
- b) an immunogenic fragment of a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, wherein said fragment comprises at least 15 contiguous amino acid residues of SEQ ID NO:1.